

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

1. (Currently Amended) A solenoid valve comprising:

a moving part adapted to be moveable that moves by electromagnetic force generated when it is energized; and

a valve fixed on a tip of the moving part so that a peripheral edge of a top surface of the valve abuts to abut a sealing part of a fluid passage when the moving part is moved, and to a sealing position to interrupt a flow of fluid; wherein:

the valve is made of comprises an elastic materials material, so that the valve that shows a tendency to yields when the valve abutted abuts the sealing part of the fluid passage; and the valve is shaped to comprise a wider first outer diameter at the top surface thereof, and a thinner second outer diameter at a portion surrounding the tip of the moving part.

2. (Currently Amended) The solenoid valve according to Claim 1, wherein a stopper is provided within the fluid passage, and the stopper is adapted to abut which abuts the valve where a yield is occurred, occurs and which prevents to prevent the valve from being excessively yielded.

3. (Currently Amended) The solenoid valve according to Claim 2, wherein the stopper ~~is pillar-shaped shape is provided within the fluid passage.~~

4. (Currently Amended) The solenoid valve according to Claim 1, wherein the valve includes a plug-in structure to receive ~~an insertion of a~~ ~~the~~ tip of the moving part, and when installing the valve on the tip of the moving part, the tip of the moving part is inserted in the valve.

5. (Original) The solenoid valve according to Claim 4, wherein a spring is provided, one end of which is fixed within the fluid passage and the other end of which is fixed in a form-stabilizing part of the valve.

6. (Currently Amended) The solenoid valve according to Claim 1, wherein ~~a part of the~~ moving part ~~comprises two separate moving parts~~ ~~is separated~~, and a spring is placed between the two moving parts.

7. (Original) The solenoid valve according to Claim 1, wherein a sliding member that suppresses movement of the moving part is provided, and a hermetic chamber is provided in a terminal of the moving part.

8. (Original) The solenoid valve according to Claim 1, wherein the valve is arranged to cover a gap formed between the moving part and a core.

9. (Original) The solenoid valve according to Claim 8, wherein the valve is arranged such that a part of the valve abuts the core when the valve is in an open state.

10. (Original) The solenoid valve according to Claim 8, wherein when the moving part moves, a part of the valve expands and contracts, or deforms.

11. (New) The solenoid valve according to Claim 1, further comprising a hard plate arranged on the top surface of the valve.

12. (New) The solenoid valve according to Claim 1, wherein the valve is T-shaped.

13. (New) The solenoid valve according to Claim 12, wherein the solenoid valve further comprises a core supporting the moving part as it moves; the T-shaped valve further comprises a cup shaped portion on the base of the T-shape opposite to the sealing part of the fluid passage; when the moving part is moved to the sealing position, the cup shaped portion is separated from the core; and

when the moving part is moved away from the sealing position, the cup shaped portion covers the core.

14. (New) The solenoid valve according to Claim 12, wherein
the solenoid valve further comprises a core supporting the moving part as it moves;
the T-shaped valve further comprises a cup shaped portion on the base of the T-shape
opposite to the sealing part of the fluid passage, and a bellows portion between the top surface of
the valve and the cup shaped portion;
when the moving part is moved to the sealing position, the bellows portion expands to
keep the cup shaped portion covering the core; and
when the moving part is moved away from the sealing position, the bellows portion
contracts.

15. (New) The solenoid valve according to Claim 1, wherein the valve is cone-shaped.

16. (New) The solenoid valve according to Claim 15, wherein:
the solenoid valve further comprises a core supporting the moving part as it moves;
the cone-shaped valve further comprises a cup shaped portion on the base of the cone-
shape opposite to the sealing part of the fluid passage;
when the moving part is moved to the sealing position, the cup shaped portion contacts
the core along a top lip of the cup-shape; and

when the moving part is moved away from the sealing position, the cup shaped portion is deformed around the core.

17. (New) A solenoid valve comprising:

a moving part that moves by electromagnetic force generated when it is energized; and
a valve fixed on a tip of the moving part to abut a sealing part of a fluid passage when the moving part is moved, and to interrupt a flow of fluid, wherein:

the valve is made of elastic materials that shows a tendency to yield when the valve abutted the sealing part of the fluid passage;

the valve includes a plug-in structure to receive an insertion of a tip of the moving part, and when installing the valve on the tip of the moving part, the tip of the moving part is inserted in the valve; and

a spring is provided, one end of which is fixed within the fluid passage and the other end of which is fixed in a form-stabilizing part of the valve.

18. (New) A solenoid valve comprising:

a moving part that moves by electromagnetic force generated when it is energized; and
a valve fixed on a tip of the moving part to abut a sealing part of a fluid passage when the moving part is moved, and to interrupt a flow of fluid, wherein

the valve is made of elastic materials that shows a tendency to yield when the valve abutted the sealing part of the fluid passage; and

a spring is provided, one end of which is fixed within the fluid passage and the other end of which is fixed in a form-stabilizing part of the valve.

19. (New) A solenoid valve comprising:

a moving part that moves by electromagnetic force generated when it is energized; and
a valve fixed on a tip of the moving part to abut a sealing part of a fluid passage when the moving part is moved, and to interrupt a flow of fluid, wherein
the valve is made of elastic materials that shows a tendency to yield when the valve abutted the sealing part of the fluid passage; and
a sliding member that suppresses movement of the moving part is provided, and a hermetic chamber is provided in a terminal of the moving part.

20. (New) A solenoid valve comprising:

a moving part adapted to be moveable by electromagnetic force; and
a valve fixed on a tip of the moving part to abut a sealing part of a fluid passage when the moving part is moved to a sealing position to interrupt a flow of fluid, wherein:
the valve comprises an elastic material that shows a tendency to yield when the valve abuts the sealing part of the fluid passage; and
a stopper is provided within the fluid passage, and the stopper is adapted to abut the valve where a yield occurs to prevent the valve from being excessively yielded.

21. (New) The solenoid valve according to Claim 20, wherein the stopper is pillar shaped.

22. (New) A solenoid valve comprising:

a rod-shaped moving part adapted to be moveable by electromagnetic force;
a valve fixed on a tip of the rod-shaped moving part so that a top surface of the valve abuts a sealing part of a fluid passage when the moving part is moved to a sealing position to interrupt a flow of fluid, wherein the valve comprises an elastic material that is adapted to yield when the valve abuts the sealing part of the fluid passage; and
a stopper arranged within the fluid passage along the axis of movement of the rod-shaped moving part so that it abuts the valve when the valve has yielded, but before the yield becomes excessive.

23. (New) A solenoid valve comprising:

a rod-shaped two-piece moving part adapted to be moveable by electromagnetic force;
a valve fixed on a tip of the rod-shaped two-piece moving part so that a top surface of the valve abuts a sealing part of a fluid passage when the rod-shaped two-piece moving part is moved to a sealing position to interrupt a flow of fluid, wherein the valve comprises an elastic material that is adapted to yield when the valve abuts the sealing part of the fluid passage; and

a spring arranged between a first portion and a second portion of the rod-shaped two-piece moving part so that the first portion and second portion do not contact each other when the rod-shaped two-piece moving part is moved.